

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
22 September 2005 (22.09.2005)

PCT

(10) International Publication Number
WO 2005/086911 A3

(51) International Patent Classification⁷: **A61C 5/00**,
A61K 6/08

(21) International Application Number:
PCT/US2005/007938

(22) International Filing Date: 8 March 2005 (08.03.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/551,688 9 March 2004 (09.03.2004) US

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
10 November 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: REACTIVE OLIGOMERIC THIOL AND ENE MATERIALS AS DENTAL RESTORATIVE MIXTURES

(57) Abstract: The present invention provides a dental composition comprising a curable blend of one or more polythiol compounds and one or more polyvinyl compounds; where one or both compounds are oligomers. In one aspect, the polythiol compounds are polythiol oligomers formed by prepolymerization of polyvinyl monomers in the presence of an excess of polythiol monomers. In another aspect, the polyvinyl compounds are polyvinyl oligomers formed by prepolymerization of polythiol monomers in the presence of an excess of polyvinyl monomers. The dental composition may further comprise one or more fillers or photoinitiators known in the art. The invention also comprises methods of making a dental prosthesis comprising the composition described above. Use of the thiol-ene oligomeric system results in cured (polymerized) dental compositions having improved physical properties, including low-shrinkage properties and reduced shrinkage induced-stress, enhanced double bond conversion percentage, and reduced odor.



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